REMARKS

This paper is in response to the official action of April 2, 2007, wherein (a) claims 1-9, 11-15, 18-34, and 36-45 were at issue, (b) claims 1-6, 11, 15, 21, 25-28, 36, 37, 44, 45 were rejected as anticipated by, or in the alternative, obvious over Warmbier et al. US 5,408,074 ("Warmbier"), (c) claims 18, 19, 29, and 30 were rejected as obvious over Warmbier, (d) claims 8, 9, 20, and 32-34 were rejected as obvious over Warmbier in view of MacKenzie US 4,608,261, (e) claims 7 and 31 were rejected as obvious over Warmbier in view of Miyazaki et al. US 4,565,670, and (f) claims 12-14, 22-24, and 38-43 were rejected as obvious over Warmbier in view of GB 2,110,803 A.

The outstanding rejections are respectively but strongly traversed. Reconsideration is requested.

By the forgoing amendments, the claims have been amended for clarity, and each independent claim 1, 2, and 45 has been amended to recite a pump for conveying the substances longitudinally through the container, a treatment chamber defined in the container and connected to a pressure limiting valve, and that the apparatus is arranged such that it can be inclined and locked in an inclined position.

The limitation "wherein such that it can be inclined and locked and locked in an inclined position" is found in original claims 7 and 31. The limitation of a pump provided for conveying for the substances longitudinally through the container is based on the specification as originally filed, such as at page 15, line 6-8, for example. The limitation of a treatment chamber being connected to a pressure limiting valve is found in original claims 12 and 38.

The rejections are traversed on the basis that the references, whether taken singly or in combination, fail to show all the elements of the rejected claims, and no basis for anticipation or obviousness rejection thus exists. Furthermore, the references fail to suggest the significant advantages derived by the invention.

More specifically, the primary Warmbier reference fails to disclose an apparatus that can be inclined and locked in an inclined position. Warmbier also fails to disclose a pressure limiting valve. Finally, none of the references provides a pump which can be used in addition to a conveyor.

All rejections are based entirely or in part on the primary Warmbier reference.

Warmbier shows, in both figures, a transport pipe as a screw conveyor located within the pipe. The transport pipe as well as the screw conveyor located within the pipe are arranged in a horizontal direction and the transport direction, shown in Warmbier is the horizontal direction.

Therefore, Warmbier fails to teach or suggest that "the apparatus is arranged such that it can be inclined and locked in an inclined position." Further, Warmbier fails to provide a pump for conveying the substances longitudinally through the container. In addition, Warmbier does not disclose a pressure-limiting valve connected to the treatment chamber.

The arrangement of combining an apparatus with the possibility to be inclined and locked in an inclined position together with a pump for conveying the substance longitudinally through the container has several advantages (see, for example, pages 15 and 16). The flow of the substances through the container can be influenced by the device for transporting the substances in the container, by gravitation, and additionally by the pump. Depending on the inclination and the components used, any transportation direction in longitudinal direction through the container can be realized. Thus, in any position the substances can be transported upwardly as well as downwardly through the container. Further, the velocity of the flow through of the substances can also be changed as necessary. For example, when positioning the apparatus vertically, and accordingly rotating the device for spirally transporting the substances, the substances will flow in a downward direction due to rotation of the device and the gravitation force. In addition, the pump can be added for accelerating the downward movement. Should the downward movement be to rapid, the pump can be used to slow rotation of the substances.

This is useful when different types of substances are treated with the device. Since the duration of the irradiation is highly important and may vary for different substances treated with the inventive apparatus, the apparatus can be adapted to different requirements and is therefore very flexible and can be used in different fields. In addition, even when the apparatus is operating, the flow through of the substances can be easily changed in direction and velocity which prevents possible damage to the substance or the apparatus in case of an unexpected function or a malfunction of the apparatus.

In addition, to further improve the functionality of the apparatus and to prevent malfunctions a pressure-limiting valve connected to the treatment chamber is provided. With this valve a pressure exceeding a predefined pressure level within the treatment chamber can be prevented.

The secondary references do not supply the deficiencies of Warmbier.

For all the foregoing reasons, it is earnestly submitted that the suggested combination of references fails to properly provide a basis for an anticipation or obviousness rejection of the present claims. Reconsideration and allowance of the claims, as amended, are solicited.

Should the examiner wish to discuss the forgoing or any matter of form in an effort to advance this application toward allowance, is urged to telephone the undersigned at the indicated number.

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Respectfully submitted,

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